

DOCUMENT RESUME

ED 405 207

SE 059 791

AUTHOR Drew, David E.
TITLE Aptitude Revisited: Rethinking Math and Science Education for America's Next Century.
REPORT NO ISBN-0-8018-5143-2
PUB DATE 6 May 96
NOTE 255p.
AVAILABLE FROM Johns Hopkins University Press, 2715 N. Charles Street, Baltimore, MD 21218-4319.
PUB TYPE Information Analyses (070) -- Books (010)

EDRS PRICE Document Not Available from EDRS.
DESCRIPTORS Educational Change; Educational Strategies; Elementary Secondary Education; *Equal Education; Higher Education; *Mathematics Education; Minority Groups; *Science and Society; *Science Education; Technology
IDENTIFIERS *Reform Efforts

ABSTRACT

This book takes the position that the people least encouraged to study mathematics and science in our society are those who have the least power. It systematically reviews studies, programs, and data to identify the causes of our educational problems and the solutions that will work. Chapter 1 includes a discussion of the links between education, technological productivity, and economic development. Chapter 2 addresses the appalling lack of scientific literacy in the American public as profiled in national surveys while Chapter 3 presents a critical evaluation and review of the international assessments of the science capabilities of elementary and high school students. Chapter 4 focuses on the college student and students choosing or defecting from choices of majors and careers in science. Chapters 5 through 7 present solutions to the problems presented in chapters 1 through 4. Chapter 5 focuses on the extraordinary hidden talent in groups that are underrepresented in the study of mathematics and science. Uri Treisman's groundbreaking research at the University of California at Berkeley is discussed further in Chapter 6. A new approach to teaching mathematics and statistics that builds upon the frame of reference the students bring with them into the classroom is presented in chapter 7. National curriculum reform efforts in mathematics and science education are reviewed, as are the human resources development programs at the National Science Foundation. The Conclusion reprises the findings and recommendations that emerged from this investigation and includes several success stories. (JRH)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
